ABSTRACT

A motor suitable for use in a medical imaging environment has (a) a centrally located means for actuating a radial wave, (b) a deformable flexspline having an inner surface and a toothed outer surface, with the flexspline coaxially aligned with the central axis of the radial wave actuating means and oriented such that the flexspline inner surface is proximate the outer boundary surface of the actuation means, and with the flexspline toothed outer surface having a first specified number of teeth, and (c) a circular spline having a toothed inner surface, this spline having an outer boundary surface and being coaxially aligned with the central axis and oriented such that the spline toothed inner surface is proximate the flexspline's toothed outer surface, with the spline inner surface having a second specified number of teeth which is different than the first specified number of teeth in the flexspline, wherein the actuation means is operable so that the action of its radial wave causes at least one of the flexspline teeth to engage at a point the toothed side of the circular spline in such a manner that an engagement point passes as a wave around the inner perimeter of the circular spine, with the movement of this engagement point causing the flexspline to rotate around its central axis.